



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : Confirmation No. 7664
Bo LIU et al. : Docket No.00194/K38-1142
Serial No. 09/281,809 : Group Art Unit 1774
Filed March 31, 1999 : Examiner M. Grendzynski

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INK JET RECORDING MATERIAL AND
PRODUCING PROCESS THEREOF

THE COMMISSIONER IS AUTHORIZED
TO CHARGE ANY DEFICIENCY IN THE
FEE FOR THIS PAPER TO DEPOSIT
ACCOUNT NO. 23-0975.

RESPONSE

Assistant Commissioner for Patents,
Washington, D.C.

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Sir:

This is in response to the Official Action dated November 30, 2001, the period for response having been extended for one month by the attached petition.

Favorable reconsideration is respectfully requested.

The claims are 1 to 5, 7 to 18 and 23 to 26.

Claims 1-5, 7-16, 18 and 23-26 are rejected under 35 USC 103(a) as being unpatentable over Miyamoto (U.S. 4,460,637) in view of Asano (U.S. 5,670,242).

The rejection concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to add a cationic resin to the Miyamoto ink-receptive layers, motivated by the desire of promoting the agglomeration of the layers and increasing the moisture-resistance and the image density of the recorded images, as taught by Asano at col. 6, lines 48-64.

This rejection is respectfully traversed.

The present claims are directed to an ink jet recording material comprising:

a support; and

at least one recording layer provided on said support;

wherein at least one of said at least one recording layer contains colloidal particles and a water-soluble resin and a cationic resin; and

a peak on a pore diameter distribution curve of said recording layer lies in a pore diameter only in the range of 2 nm to 100 nm.

In order to demonstrate the unobvious properties of the present invention, there is submitted herewith the Rule 132 Declaration of R. Kitamura comparing a representative Example of the present invention with representative examples of the cited references.

In Comparative Example 1 of this Declaration, a representative example of an ink jet recording material according to Asano (U.S. 5,670,242) was prepared.

In Comparative Example 2 of the Declaration, a representative example of an ink jet recording material according to Miyamoto et al. (U.S. 4,460,637) was prepared.

In Comparative Example 3 of the Declaration, an ink jet recording material was prepared by adding the coating solution of Comparative Example 2 to the cationic resin of Example III-1 of Asano.

The foregoing three comparative examples were compared to Example 1 in accordance with the present invention.

As can be seen from Table A on page 11 of the Declaration, the results in accordance with the present invention were unexpectedly superior to those of the comparative examples in several important respects.

In particular, note the advantageous properties of the present invention in terms of peak of pore diameter distribution, print density, gloss on printed area and dot shape.

The advantages of the present invention are unobvious from the cited references alone or combined.

For the foregoing reasons, it is submitted that the rejection on Miyamoto et al. in view of Asano is untenable.

Claim 17 is rejected under 35 USC 103(a) as being unpatentable over Miyamoto, as applied to claims 1-5, 7-16, 17 and 23-26, above, in further view of Snowtex Product Information.

This rejection is also respectfully traversed.


It is apparent that the Snowtex reference cannot overcome the above-discussed deficiencies of Miyamoto, particularly in view of the attached Declaration.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

Bo LIU et al.

By: 
Matthew Jacob
Registration No. 25,154
Attorney for Applicants

MJ/pjm
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
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